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Paul A. Kline

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EXAMINER

LI, SHI K

ART UNIT

PAPER NUMBER

2613

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/016,998	Applicant(s) KLINE, PAUL A.	
	Examiner Shi K. Li	Art Unit 2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,6,14-18,20-24,27-29,33-39,41,43-46 and 50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,6,14-18,20-24,27-29,33-39,41,43-46 and 50 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/4/2009, 5/28/2009</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of species IV in the reply filed on 23 July 2009 is acknowledged.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1, 3-4, 6, 14-18, 20-24, 27-29, 33-39, 41, 43-46 and 50 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 1 recites the limitation "routing the data to one of a plurality of communication devices located in one of a plurality of customer premises" in lines 6-7 of the claim. Instant specification does not teach using a transformer bypass device together with a router for routing data to one of a plurality of customer premises. Therefore, the subject matter is considered as new subject matter.

Claim 20 recites the limitation "a third interface port configured to communicate data signals over a medium voltage power line of the electric power system" in lines 8-9 of the claim. The Examiner recognizes that the original claim 20 reads on FIG. 7 of instant specification. FIG. 7 does not disclose a third port. Therefore, the limitation is considered as new subject matter.

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Claim 20 recites the limitation “a router in communication with the fiber optic transceiver and the modem and configured to route data to one of a plurality of communication devices located in one of a plurality of customer premises” in lines 13-15 of the claim. Instant specification does not teach using a transformer bypass device together with a router for routing data to one of a plurality of customer premises. Therefore, the subject matter is considered as new subject matter.

Claim 36 recites the limitation “a router in communication with the fiber optic transceiver and configured to route data to one of a plurality of telecommunication network devices located in one of a plurality of customer premises” in lines 6-8 of the claim. Instant specification does not teach using a transformer bypass device together with a router for routing data to one of a plurality of customer premises. Therefore, the subject matter is considered as new subject matter.

4. Claims 1, 3-4, 6, 14-18, 20-24, 27-29, 33-39, 41, 43-46 and 50 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 1 recites the limitation “routing the data to one of a plurality of communication devices located in one of a plurality of customer premises” in lines 6-7 of the claim. Instant specification does not describe the limitation in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

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Claim 20 recites the limitation “a router in communication with the fiber optic transceiver and the modem and configured to route data to one of a plurality of communication devices located in one of a plurality of customer premises” in lines 13-15 of the claim. Instant specification does not describe the limitation in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 36 recites the limitation “a router in communication with the fiber optic transceiver and configured to route data to one of a plurality of telecommunication network devices located in one of a plurality of customer premises” in lines 6-8 of the claim. Instant specification does not describe the limitation in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 1, 4, 6, 14-18, 20-24, 27-29, 33-39, 43-46 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown1 (U.S. Patent 6,282,405 B1) in view of Dhara et al. (U.S. Patent 7,203,185 B1) Lehr et al. (U.S. Patent 6,643,566 B1) and Brown2 (U.S. Patent 5,949,327).

Regarding claims 1 and 36, Brown1 teaches in FIG. 13 a hybrid communication network comprising power line network 132 which is coupled to a telecommunication network 130 via coaxial/fiber interface unit 138. The hybrid communication network allows data to be transmitted between the power line network and a fiber network. Brown1 teaches in FIG. 2 transceiver/modem between the network conditioning unit (corresponding to 136 of FIG. 13) and

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the optical network. A transceiver for interfacing an optical network is an optical transceiver. The difference between Brown1 and the claimed invention is that Brown1 does not teach a router. As admitted by instant specification on page 11, lines 12-13, fiber optical interface device functioning as a router is well known to those skilled in the art. Furthermore, Dhara et al. teaches in FIG. 1 headend unit for interfacing between an electrical network 132 or 134 and an optical network (optical node 118). Headend unit comprises optical Tx/Rx, modem 120 and router 124. Lehr et al. teaches in FIG. 2A a network for routing electric power and signals to various telephones and computers via router 66. These telephones and computers are likely to be in different houses. One of ordinary skill in the art would have combined the teaching of Dhara et al. and Lehr et al. with the hybrid communication network of Brown1 because a router forwards traffic according to destination information and, therefore, eliminates unnecessary traffic and increases security.

The combination of Brown1, Dhara et al. and Lehr et al. still fails to teach “wherein said fiber optic transceiver, said modem, and said router are co-located with the distribution transformer”. Brown2 teaches in FIG. 1 though FIG. 4 power line communication networks similar to that of Brown1. Brown2 teaches in FIG. 13 that the transceiver/modem equipment is located in equipment housing 1310 that is co-located with 11kV/L.V. transformer, both of which are mounted on a wooden support pole 1302. Brown2 also teaches in col. 5, lines 1-11 by-pass unit for coupling signal between primary and secondary of power transformer. One of ordinary skill in the art would have been motivated to combine the teaching of Brown2 with the modified communication network of Brown1, Dhara et al. and Lehr et al. because putting the equipment housing close to the transformer shortens the wiring that carries hazardous voltage and reduces

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maintenance cost. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to co-locate the transceiver/modem equipment and the transformer, as taught by Brown2, in the modified communication network of Brown1, Dhara et al. and Lehr et al. because putting the equipment housing close to the transformer shortens the wiring that carries hazardous voltage and reduces maintenance cost.

Regarding claim 4, Brown1 teaches in col. 7, lines 10 radio frequency of 1 MHz.

Regarding claim 6, Brown1 teaches in FIG. 13 coaxial/fiber interface unit 138 and bi-directional amplifiers 140.

Regarding claim 14, Brown1 teaches in FIG. 13 telecommunications signals 146.

Regarding claim 15, Brown1 teaches in FIG. 13 unit 144.

Regarding claim 16, Brown1 suggests in col. 1, lines 40 that telecommunication signals are used for providing telephone services.

Regarding claim 17, Brown2 teaches in FIG. 14 coaxial cable 1401.

Regarding claim 18, Brown1 teaches in FIG. 13 power line interface unit 144 at user premises 142.

Regarding claim 20, Brown2 shows in FIG. 14 an interface for connecting telecoms to a high voltage network; Brown2 shows in FIG. 15 a bypass. It is understood that the combination of FIG. 14 and FIG. 15 teaches a bypass connection for telecoms with three interface ports.

Regarding claim 21, it is understood that an optical transceiver converts optical signal to electrical signal.

Regarding claims 22-23 and 27, it is understood that modem stands for modulator/demodulator and modulates/demodulates signal with a carrier.

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Regarding claims 24 and 28, it is understood that optical transceiver converts electrical signal to optical signal.

Regarding claims 29 Brown1 teaches in col. 3, lines 67 low-voltage network of 240 V. Brown1 teaches in FIG. 1 buildings 48.

Regarding claim 33, Brown1 teaches in FIG. 13 device 144 for coupling to telecommunications signals 146.

Regarding claim 34, Brown1 suggests in col. 1, lines 40 that telecommunication signals are used for providing telephone services.

Regarding claim 35, Brown2 teaches in FIG. 14 coaxial cable 1401.

Regarding claim 37, Brown1 teaches in FIG. 13 interface device 136 for connecting to the power system and interface device 144 for connecting to telecommunication signals.

Regarding claim 38, Brown1 teaches in FIG. 1 buildings 48.

Regarding claim 39, Brown1 suggests in col. 1, lines 40 that telecommunication signals are used for providing telephone services.

Regarding claim 43, Dhara et al. teaches in FIG. 1 router 146 and CPBTG 142 that communicate with the modem.

Regarding claim 44, a router is a computing device.

Regarding claim 45, Brown1 teaches in FIG. 1 transformer 44.

Regarding claim 46, Brown2 teaches in FIG. 14 and FIG. 15 bypass bridge.

Regarding claim 50, Brown1 teaches in FIG. 13 user premises.

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7. Claims 3 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown1, Dhara et al., Lehr et al. and Brown2 as applied to claims 1, 4, 6, 14-18, 20-24, 27-29, 33-39, 43-46 and 50 above, and further in view of Feldman et al. (U.S. Patent 6,577,414 B1).

Brown1, Dhara et al., Lehr et al. and Brown2 have been discussed above in regard to claims 1, 4, 6, 14-18, 20-24, 27-29, 33-39, 43-46 and 50. The difference between Brown1, Dhara et al., Lehr et al. and Brown2 and the claimed invention is that Brown1, Dhara et al., Lehr et al. and Brown2 do not teach Synchronous Optical Network (SONET). However, SONET is well known in the art for transporting optical signals. For example, Feldman et al. teaches in FIG. 2 SONET equipment 218 and 233. One of ordinary skill in the art would have been motivated to combine the teaching of Feldman et al. with the modified hybrid communication network of Brown1, Dhara et al., Lehr et al. and Brown2 because SONET has become an industrial standard (it is equivalent to the international standard SDH) and is widely used for transporting optical signals in the North America. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use SONET for the optical signals, as taught by Feldman et al., in the modified hybrid communication network of Brown1, Dhara et al., Lehr et al. and Brown2 because SONET has become an industrial standard and is widely used for transporting optical signals in the North America.

Response to Arguments

8. Applicant's arguments with respect to claims 1, 3-4, 6, 14-18, 20-24, 27-29, 33-39, 41, 43-46 and 50 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

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9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shi K. Li whose telephone number is 571 272-3031. The examiner can normally be reached on Monday-Friday (6:30 a.m. - 4:00 p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye can be reached on 571 272-3078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

skl

17 September 2009

/Shi K. Li/

Primary Examiner, Art Unit 2613